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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/064,892	08/27/2002	Thomas M. Breuel	111744	3616
27074	7590	01/31/2006	EXAMINER	
OLIFF & BERRIDGE, PLC. P.O. BOX 19928 ALEXANDRIA, VA 22320			PAULA, CESAR B	
			ART UNIT	PAPER NUMBER
			2178	
DATE MAILED: 01/31/2006				

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>		<b>Applicant(s)</b>	
	10/064,892		BREUEL ET AL.	
	<b>Examiner</b>		<b>Art Unit</b>	
	CESAR B. PAULA		2178	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 14 November 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1,3-16 and 18-28 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 3-16, and 18-28 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

Art Unit: 2178

### **DETAILED ACTION**

1. This action is responsive to the RCE amendment, and Oath/Declaration filed on 10/26, and 11/14/2005 respectively.

**This action is made Non-Final.**

2. In the amendment, claims 1, 3-16, and 18-28 are pending in the case. Claims 1, 14, and 16 are independent claims.

### ***Oath/Declaration***

3. A corrected Oath/Declaration has been submitted, and accepted. Therefore, its objection has been withdrawn.

### ***Priority***

4. Acknowledgment is made of applicant's claim for domestic priority under 35 U.S.C. 119(e), and based on U.S provisional application # 60/360,171 filed on 3/1/2002, which papers have been placed of record in the file.

### ***Drawings***

5. The drawings filed on 8/27/2002 have been approved by the Examiner.

***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 1, 3-16, and 18-28 remain rejected under 35 U.S.C. 102(e) as being anticipated by Formanek et al, hereinafter Formanek (USPub.# 2003/0014445, 1/16/2003, filed 7/13/01, as disclosed in IDS filed on 9/24/03).

Regarding independent claim 1, Formanek discloses decomposing, and processing a document image, in a *sequence* of steps, in a bitmap format—*deconstructing a document in a page image format* -- (0029, 0032).

Moreover, Formanek discloses that as a result of the decomposition, and processing of the document, an intermediate document, comprising of an image divided into image and text blocks, is put together—*synthesizing the deconstructed document into an intermediate data structure* -- (0032, fig. 3b).

Further, Formanek discloses the reflowing of the decomposed document to fit into the size, such as width, of a target device's display—*distilling the intermediate data structure for redisplay in a format usable for an arbitrarily sized display structure* -- (0030, 0034, fig. 4).

In addition, Formanek discloses that as a result of the decomposition the document image is divided into image and text blocks, by first identifying the position of textual and graphical elements blocks—*identifying text image areas and non-text image areas, and locating and isolating text and non-text image areas*. A software identifies the locations, height and width—*layout properties--* of text and graphic blocks—*processing the isolated text image areas and non-text image areas into text line regions and layout properties-* (0029, 0032, fig. 3b).

Further, Formanek discloses placing or surrounding each word with a bounding graphic blocks, and numbers for identifying the location of the word, and graphics—*processing located text line regions into segmented image elements; and locating and labeling segmented image elements --* (0032, 0033, fig. 3b-c).

Furthermore, Formanek discloses the compression of the decomposed document elements, such as characters, using character symbols to represent images of characters—*token-based image elements*—before the processed document is transferred to a pda (0026).

Regarding claim 3, which depends on claim 2, Formanek discloses that as a result of the decomposition the document image is divided into image and text blocks—*physical segmentation of data --* (0032, fig. 3b).

Regarding claim 4, which depends on claim 1, Formanek discloses that as a result of the decomposition the document image is divided into image and text blocks (0032, fig. 3b).

Art Unit: 2178

Regarding claim 5, which depends on claim 1, Formanek discloses that as a result of the decomposition the document image turns into a document divided with image blocks based upon the image location, width and height— *converting non-text image areas, Layout properties and segmented image areas into the intermediate data structure--* (0032-0033, fig. 3b).

Regarding claim 6, which depends on claim 1, Formanek discloses the reflowing of the decomposed document to fit into the size, such as width, of a target device's display—*intelligible display layout --* (0030, 0034, fig. 4).

Regarding claim 7, which depends on claim 6, Formanek discloses that as a result of the decomposition the document image is divided into image and text blocks. The text blocks show segmented word images in a reading order (0032-0033, fig. 3c).

Regarding claim 8, which depends on claim 1, Formanek discloses the storage of the bitmap image blocks in a processing device (0030).

Regarding claim 9, which depends on claim 1, Formanek discloses the reflowing of the decomposed document to fit into the size, such as width, of a target device's display. The reflowed document is displayed in a readable manner, such as a single format (0030, 0034, fig. 4).

Regarding claim 10, which depends on claim 1, Formanek discloses the reflowing of the decomposed document to fit into the size, such as width, of a target device's display. The document is retrieved over the Internet, reformatted, and displayed—*Internet browsable format* - (0027, 0034, fig. 4).

Regarding claim 11, which depends on claim 1, Formanek discloses the reflowing of the decomposed document to fit into the size, such as width, of a target device's display—*device specific display format* -- (0027, 0034, fig. 4).

Regarding claim 12, which depends on claim 1, Formanek discloses the *reflowing* of the decomposed document to fit into the size, such as width—*screen size* --, of a target device's display (0027, 0034, fig. 4).

Regarding claim 13, which depends on claim 1, Formanek discloses the reflowing of the decomposed text in the document to fit into the size, such as width, of a target device's display (0027, 0034, fig. 4).

Regarding independent claim 14, Formanek discloses identifying block positions of various text, and image regions, and decomposing a document image in a format, such as a pdf format,—*analyzing page layout, converting a sequence of page images into a sequence of document elements images captured in a tagged format* -- (0029, 0032, fig. 3b).

Furthermore, Formanek discloses the reflowing of the decomposed document to fit into the size, such as width, of a target device's display—*re-converting the tagged format*. The document is retrieved over the Internet, reformatted, and displayed—*Internet browsable format* - (0027, 0034, fig. 4).

Regarding claim 15, which depends on claim 14, Formanek discloses that as a result of the decomposition the document image is divided into image and text blocks. The text blocks show segmented word images in a reading order (top to bottom text organization) similar to that of the original document (0032-0033, fig. 3c).

Regarding claim 16, limitations *an input/output device.....a distilling circuit...* are directed towards a computer system for implementing the steps found in claims 1, and therefore are similarly rejected.

Moreover, Formanek discloses that as a result of the decomposition the document image is divided into image blocks—*deconstruct the document into image areas*. A bounding block surrounds each word by identifying the location of the word, and graphics-- *segmented image elements*. A software identifies the locations, height and width—*layout properties--* of text and graphic blocks (0032-0033, fig. 3b).

Moreover, Formanek discloses that as a result of the decomposition the document image turns into a document divided with image blocks—*synthesizes the non-text image areas, the layout properties, and the set of segmented image elements into an intermediate data structure --* (0032-0033, fig. 3b).



Furthermore, Formanek discloses the reflowing of the decomposed document to fit into the size, such as width, of a target device's display—*distilling the intermediate data structure for redisplay in a format usable for an arbitrarily sized display structure* -- (0030, 0034, fig. 4).

Claims 18-20, and 22-27 are directed towards a computer system for implementing the steps found in claims 3, 6-7, and 10-15 respectively, and therefore are similarly rejected.

Regarding claim 21, which depends on claim 16, Formanek discloses the storage of the bitmap image blocks—*deconstructed document*-- in a processing device (0030).

Regarding claim 28, which depends on claim 26, Formanek discloses that as a result of the decomposition the document image is divided into image and text blocks—*segmentation algorithm* --. A software identifies the locations of text and graphic blocks—*structure analyzer*— (0032, fig. 3b).

### ***Response to Arguments***

8. Applicant's arguments filed on 6/7/2005 have been fully considered but they are not persuasive.

Regarding claim 1, the Applicants state that Formanek fails to teach or suggest the deconstruction of the image of a document, and then synthesizing it into an intermediate structure (pages 8-10). The Examiner disagrees, because Formanek discloses first, decomposing a document image, in a *sequence* of steps, in a bitmap format—*deconstructing a document in a page image format* -- (0029). As a result of the decomposition, and processing of the document,

Art Unit: 2178

an intermediate document, comprising of an image divided into image and text blocks, is put together—*synthesizing the deconstructed document into an intermediate data structure* -- (0032, fig. 3b). In other words, after the deconstruction process is finished, all the processed parts of the document are put together into a decomposed document image—*intermediate data structure*—which is then sent to a pda, where the reflowing of the document takes place (0030, 0034, fig.4). The sequence of steps is as follows: 1-A bitmap document, 2-deconstruction of the document, 3-a complete image of the deconstructed document, and 4-reflowing of the deconstructed image.

### ***Conclusion***

I. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cesar B. Paula whose telephone number is (571) 272-4128. The examiner can normally be reached on Monday through Friday from 8:00 a.m. to 4:00 p.m. (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Hong, can be reached on (571) 272-4124. However, in such a case, please allow at least one business day.

Information regarding the status of an application may be obtained from the Patent Application Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, go to <http://portal.uspto.gov/external/portal/pair>. Should you have any questions about access to the Private PAIR system, please contact the Electronic Business Center (EBC) at 866 217-9197 (toll-free).

Art Unit: 2178

Any response to this Action should be mailed to:  
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P.O. Box 1450

Alexandria, VA 22313-1450

Or faxed to:

- (571)-273-8300 (for all Formal communications intended for entry)



**CESAR PAULA**  
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1/26/06